Mooncell

Shenzhen Mooncell Electronics Co., Ltd

FPGA Receiving Card

A712 Product Specifications

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

Content

1 Product Overview 1
Product Introduction 1
Application Scenarios 1
2Function Introduction 2
3Product Parameters 5
Basic Parameters 5
Hardware Introduction 5
Output Port Definition 6
Indicator Illustration 8
Dimensions 8
4Product Specifications 9
Specifications 9
Precautions 9

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

Updates History

Document Version	Hardware Version	Release Date	Version History
V3.0	DA712 V3.1	June 10, 2022	First Release
V3.1	DA712 V3.1	June 13, 2022	Maximum Loading: 512x320
V3.2	DA712 V3.1	June 15, 2022	Change the maximum loading capacity, the maximum loading description distinguishes between conventional and PWM IC.
V3.3	DA712 V3.1	July 20, 2022	Change the product name to A712, and the functional parameters remain unchanged.
V3.4	A712 V1.0.0	September16, 2022	Change the PCB version, change the picture
V3.5	A712 V1.0.1	October 9, 2022	Change the PCB version, change the picture

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

1 Product Overview

Product Introduction

*A712 is a receiving card that fully researched and developed by Mooncell; it adopted 12x HUB75E interfaces; it can supports the maximum 24 groups of the parallel connection data;the maximum loading capacity could reach up to 512*384 pixels; with strong processing ability, supper reliability and high competitive price.*

Application Scenarios

It could be widely used for high-end LED display area that requires high standards; and has significant advantages in application scenarios such as led rental display, TV Broadcast, LED display for respectable Event,High-end project,etc.

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

2 Function Introduction

Displaying Effect

It supports pixel level brightness and Chroma Calibration	*Using it with the Mooncell Calibration Software to calibrate each one of the pixels on its brightness and Chroma. It can effectively eliminate the Chromatic aberration so as to enhance its consistency of the brightness and Chroma to a high level and result in a better displayed effects.*
Multiple Solutions of the Displayed Effects are Supported	*Using it with Monncell AutoLED Software, the Refresh and Grey Scale performances are able to take the precedence over other settings.*
The Images on the led screen can be rotated 90 degree in a factor of multiple times	*Using it with Mooncell AutoLED Software.*
The images can be zoomed in or out	*Using it with Mooncell AutoLED*

Enhanced Operability:

The Receiving Card is Supported to detect its own Sequence number	*Using the Network Port testing function on Mooncell AutoLED Software, the receiving card serial number and the Network Port Information will be displayed on the target cabinet. Users will be able to get to know the locations of the receiving cards as well as its Connection diagram.*
Data Port User-Defined is supported	*Using it with the Mooncell AutoLED Software, you can detect and edit the output data of the receiving cards.*
To build up a complicated cabinet is supported	*On AutoLED Software, there is an 'Advanced Setting', from here you can quickly arrange or structure the*

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

	modules at your option.
To structure a complicated Led Screen is supported	*On AutoLED Software, there is a "Complicated Led Screen Connection", from here you can quickly arrange or structure the cabinet modules on your option.*

Hardware Stability

Ethernet Cable Backup(Hot Backup)	*The main cable will be having the loop connection. If there's one cable breaks then still there will have another one to make sure the led display work properly.*
	Dual receiving cards backup is supported(Dual Circuit backup design) Customized :when the main working receiving card fails, the other one (backup) will take its job to keep the led display working properly.

Smart Software and Hardware Stability

The receiving card can read the configuration data back from where it has been stored	*You will be able to do this on Mooncell AutoLED Software.*
It supports to detect the error rates of the network cable	*On the Mooncell AutoLED Software, you can detect the network cable connectivity in real time to tell the condition of the network cables, so that you can get rid of any errors immediately.*
Communication Monitoring Function	*On Mooncell AutoLED Software, you can monitor the Working Status of the receiving cards in real time.*

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

Dual Power Supplies Backup is supported	*2 Power Supplies can be connected simultaneously and the working status can be detected. Whenever there's a power supply failure, it can be detected, the system then will automatically decrease the brightness of the led screen so that it can still keep working properly*
It supports to detect the voltage(customized)	*It will detects the voltage status of the receiving cards.*
It supports to detect the temperature(customized)	*The operating temperature of the receiving cards could be detected.*
It supports to detect the power status(customized)	*The power status of the power supplies could be detected.*

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

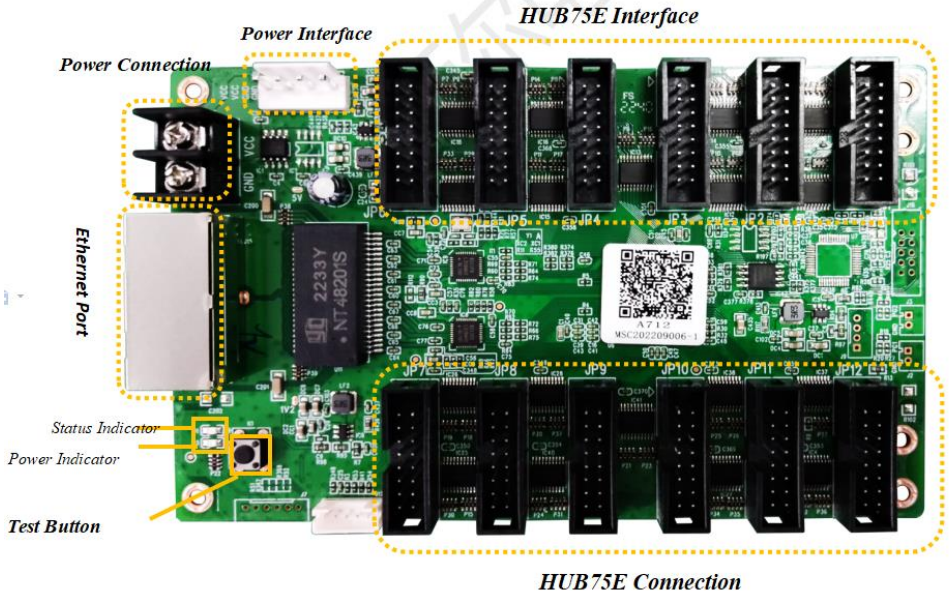
3Product Parameters

RGB Parallel	Data Ports/Interfaces/QTY	Driver IC	The Maximum Loading Capacity(Pixels)	Loading Capacity After lightness Calibrating （Pixels）	Loading Capacity after Color Calibrating(Pixels)
24 Groups	HUB75E/12	Conventional	512*320	512*256	256*320
		PWM	512*384	512*256	256*320

Basic Parameters

Single Network Pot Cascading Quantity	Scanning Lines Supported		
≤1000PCS	1-64 Scan		

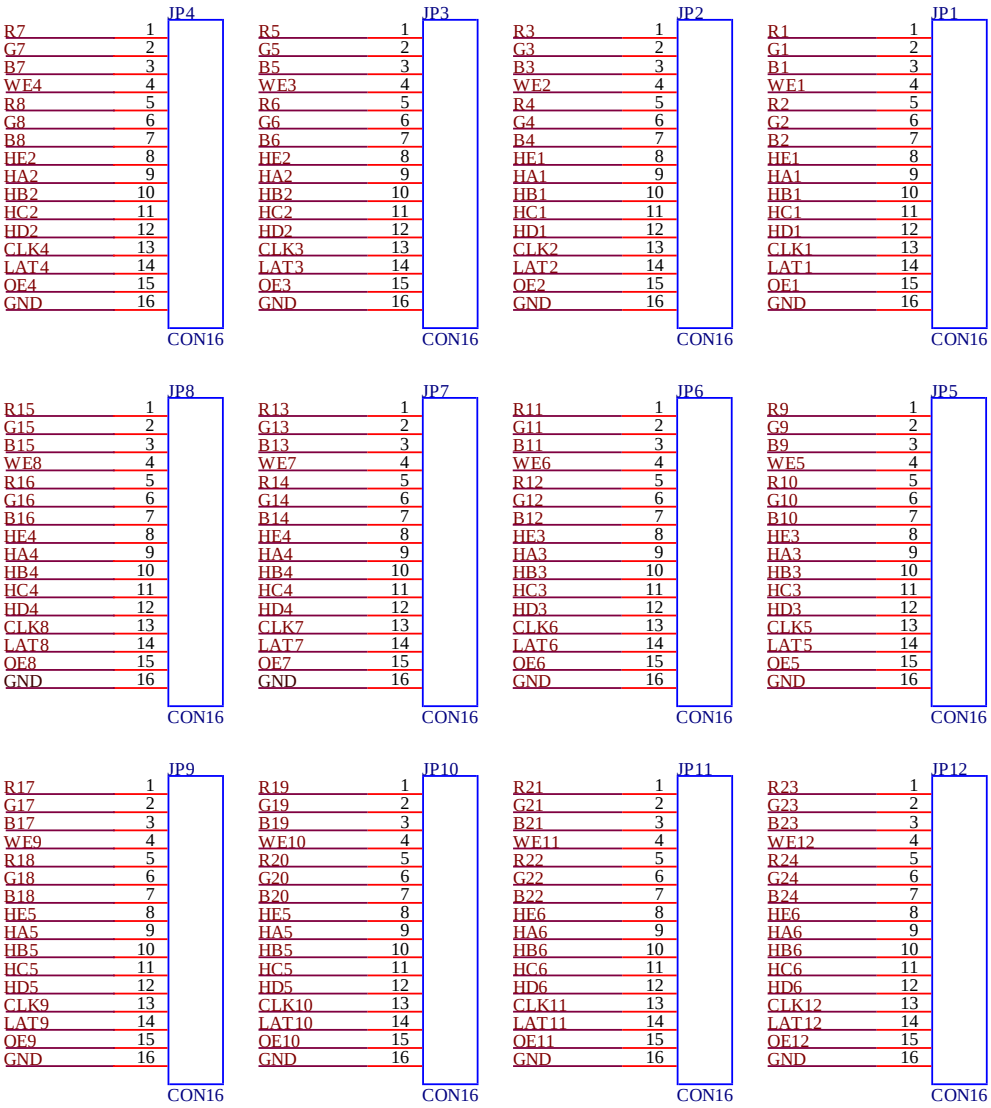
Hardware Introduction



Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

Output Port Definition

Port Definition of the 24 Groups of parallel connection data



JP1-JP12 PIN Definition：

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town,
Baoan District, Shenzhen,PRC

Illustration	Definition	PIN#	PIN#	Definition	Illustration
RGB Data Output	R	1	2	G	RGB Data Output
	B	3	4	GND	GND
	R	5	6	G	RGB Data Output
	B	7	8	HE	Line Decoding Signal
Line Decoding Signal	HA	9	10	HB	
	HC	11	12	HD	
Shift Clock Output	CLK	13	14	LAT	Latch Signal
Display Enable(Remarks 1)	OE	15	16	GND	GND

Remarks 1: Pin # 15 is the display enable pin. And When using the PWM chip it will be the GCLK Signal.

J11 Pin Definition:

Definition	PIN#	PIN#	Definition
+5V	1	2	GND
FLS_CS	3	4	FLS_DO
FLS_CLK	5	6	FLS_DI
PROGRAM_B	7	8	mCONF_DONE
GND	9	10	+5V

J12 Indicator PIN Definition:

PIN#	1	2	3	4	5
Definition	GND/KEY-	KEY+	LEDR-	VCC/LED+	LEDG-

J14 Socket PIN Definition:

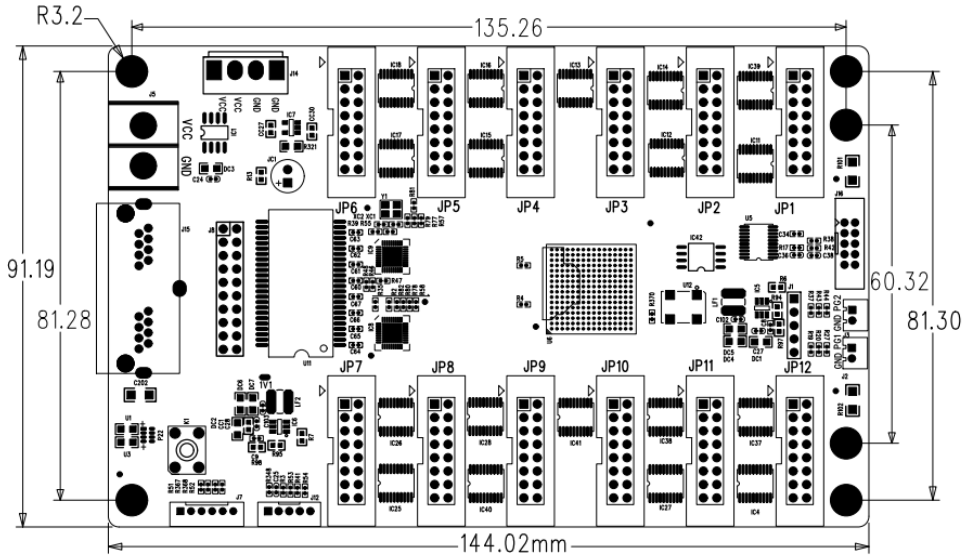
PIN#	1	2	3	4
Definition	VCC	VCC	GND	GND

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

Indicator Illustration

Indicator	Position	Status	Illustration
Status Indicator (Green)	U1	Flickering Slowly at a constant	The receiving card is working properly, The Ethernet Cable Connection is fine, No DVI Signal Input
		Flickering Fast at a constant	The receiving card is working properly, The Ethernet Cable Connection is fine, with DVI Signal Input
		It goes out	No Gigabit Ethernet Signal
		Fast Flickering 3 Tunes	The receiving card is working properly, The Ethernet Cable Loop Connection is fine, DVI Signal Input
Status Indicator	U3	Long Lasting On	Power is On

Dimensions



Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town, Baoan District, Shenzhen,PRC

4Product Specifications

Specifications

Electric Parameters	Input Voltage	DC3.5-5.5V
	Rated Current	0.6A
	Rated Power	3W
Operating Environment	Operating Temperature	-20℃ - 70℃
	Operating Humidity	10%RH-90%RH
Storage Environment	Temperature	-25℃～125℃
Dimensions	144.02mmX91.19mm	
Net Weight	100.8g	
Certifications	It conforms to RoHS and CE-EMC standards.	

Precautions

1. The testing (debugging) and installation should be done by the qualified professionals
2. Anti-Static, Water-Proof and Dust-Proof Required

Web:www.mooncell.com.cn
Skype:cheersnigel
ADD:1st Floor,Comprehensive Building, Baoshi South Road,Shiyan Town,
Baoan District, Shenzhen,PRC